

COUNTY OF SAN DIEGO, CALIFORNIA
BOARD OF SUPERVISORS POLICY

Subject

Voluntary Resource-Efficient Guidelines on New Construction
and Building Renovation Projects

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SUBJECT

Resource-efficient guidelines on new construction and building renovation projects.
(a.k.a. Sustainable Building Projects and/or Green Building Programs)

PURPOSE

- 1.To assert the County's commitment to resource efficient building practices, and provide leadership and guidance in promoting, facilitating, and instituting such practices in the community.
- 2.To consider resource efficient design and operations for County-funded renovation and new building projects.
- 3.To implement an Innovative Building Review Committee (IBRC) Program that advocates energy efficiency and resource efficient guidelines (i.e. water and energy conservation) for the design, construction and operation of structures.
- 4.To establish voluntary guidelines that support efficient use of materials and resources such as land, water and energy, as well as encourage reuse and recycling during building construction, operation and demolition.

BACKGROUND

Local agencies are aware of the importance of conserving finite resources and ensuring that development practices are sustainable. The construction practices of the past two decades has been at a high cost to the environment. Little or no effort has been made to control the amount of energy and natural resources demanded to build and maintain this building stock. Over 40% of total energy produced in this country is consumed by the built environment. The resources required to create, operate and replenish this level of infrastructure and income are enormous, and are diminishing. Innovative building techniques minimize energy usage and destruction to the environment.

That recognition is changing the way the building industry and building owners approach the design, construction, and operation of structures. The building industry is moving toward a new value in its work: that of environmental performance. The synonymous term Green Building means designing, constructing and operating buildings that give a high level of environmental, economic and engineering performance. Areas of importance include occupant health, energy and transportation efficiency, resource and material conservation (air, water, land, fuel), as well as reuse and recycling during

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building construction, operation and demolition. The concept applies to all buildings, including residential, commercial and industrial.

When cost differences are reasonable, it has been shown through recent studies that consumers choose sustainable and energy efficiency options. If all aspects of available innovative techniques were utilized, green buildings ideally would result in the following range of benefits:

- make appropriate use of land;
- make efficient use of finite natural resources;
- reduce total lifetime energy usage;
- be economical to build and operate;
- enhance human health for builders and homeowners;
- use non-toxic, local materials to assist the local economy;
- preserve plants, animals, endangered species, and natural habitats;
- protect agricultural, cultural, and archaeological resources; and
- demonstrate recyclability, and waste reduction practices.

The benefits of Green Building have been shown through several pioneering and demonstration projects across the country. Two examples in this region are the Southern California Resource Center in Downey, CA, and the City of San Diego's Ridgehaven Green Building Demonstration Project. The Ridgehaven project has met or exceeded all indoor air quality and energy efficiency objectives; it consumes 50% less energy than allowed by California's Title 24 and places in the lowest ten percentile for energy consumption in the region.

POLICY

It is the policy of the Board of Supervisors to support the following voluntary resource efficient guidelines on new and building renovation projects:

1. Projects shall avoid any permanent adverse impact on the natural state of the air, land and water, by using resources and methods that minimize pollution and waste, and do not cause permanent damage to the earth, including erosion.
2. Buildings shall be designed to take the maximum advantage of natural sources of heat, cooling, ventilation and light.

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3. Projects shall include innovative strategies and technologies to conserve water, reduce effluent and run-off, and recharge the water table.

4. Projects shall be planned to incorporate public transportation and reduce the need for individual automobiles.

5. Buildings shall be constructed and operated using materials, methods, mechanical and electrical systems that ensure a healthful indoor air quality, while preventing contamination by carcinogens, volatile organic compounds, fungi, molds, bacteria, and other known toxins.

6. Projects shall be planned to minimize waste through the use of innovative methods such as life cycle analysis and preferences given to: a) reuse or the highest practical recycled content; b) raw materials derived from sustainable or renewable sources; c) materials and products ensuring long life/durability and recyclability; d) materials requiring the minimum of energy and rare resources to produce and use; and e) materials requiring the least amount of energy to transport to the job site.

7. Mechanical and electrical systems shall be designed and constructed to achieve the maximum energy efficiency achievable with current technology. Computer programs such as DOE-2 shall be used where feasible to analyze the effects of various design options and select the set of options producing the most efficient integrated design.

8. Creative design and innovative energy sources and uses shall be encouraged to reduce the consumption of energy from non-renewable sources. A deliberate effort shall be made to convert to renewable energy sources to the extent that such options are feasible.

9. Energy efficiency measures shall be selected to achieve energy consumption at 50% below California's current Title 24 standards, with a target maximum pay-back period of five years.

10. For each major project involving architectural, transportation, mechanical and electrical systems, a design team shall be organized to coordinate the professions and disciplines required for the project, in an effort to integrate the various design elements and systems and maximize the total energy efficiency.

11. A public education outreach effort shall be implemented to make the community aware of the need for, and benefits of, Green Building. Methods of the outreach may include literature distribution, reports and promotional items in the media, work shops and seminars, and community events. An environmental resource library, with public access, shall be established in the County as part of the effort.

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12. The County shall develop a recognition program for innovative Green Building projects implemented in the public as well as private sector in an effort to encourage and recognize outstanding environmental protection and energy conservation projects. The County shall appoint a committee to recommend projects for recognition by the County Council.

PROCEDURE

1. The County shall seek cooperation with other governmental agencies and the private sector to promote, facilitate, and implement the Innovative Building Review Committee (IBRC) Program in the community.
2. Ad-hoc partnerships should be formed for individual major projects, to the extent practical, in order to involve various groups and elements in the community to maximize the benefit-to-cost ratio in terms of environmental protection and energy conservation. These groups may include: government agencies, utility companies, educational institutions, public interest organizations, financial institutions, building owners, manufacturers and vendors.
3. The County shall develop and promulgate a comprehensive set of technical guidelines for Green Building. Until the County's guidelines are completed, The Sustainable Building Technical Manual published by Public Technology, Inc. shall be used.
4. The County shall evaluate its existing facilities and prioritize them for retrofit projects to improve energy efficiency. Monetary savings from initial energy conservation projects shall be used to fund additional projects and related administration expenses.
5. The County shall support State and Federal legislation that mandates or allows sustainable development, conservation of natural resources, and energy efficiency technology.

Board Action:

4/15/97 (41)

Sunset Date:

12/31/02